

VIRTUAL ANTENNA TECHNOLOGY (VAT) AND APPLICATIONS

ABSTRACT OF THE DISCLOSURE

5 Within an antenna array 120, the magnitude and phase
of a relationship resulting from propagation delay between
a sample taken at a first antenna 1 to a sample taken at a
second antenna 2 at a different time is employed to derive
a data value for a virtual antenna 3. Sub-patch antennas
10 203 perturbed in elevation are employed to expand the
elevation range of acceptable gain. Multiple arrays each
providing a separate radio frequency output are employed
with digital beamform steering to a single point, together
with low noise amplification at the feed point, to achieve
15 sufficient gain with an acceptable total array size. A
modular implementation with fiber transport is preferably
used.